UNMARKED DELETION MUTANTS OF MYCOBACTERIA
AND METHODS OF USING SAME

Abstract of the Disclosure

Disclosed is a recombinant slow-growing mycobacterium comprising at least one mycobacterial gene containing an unmarked mutation, where an "unmarked mutation" is a mutated nucleotide sequence introduced into a mycobacterium where the introduced mutated nucleotide sequence does not contain a selectable marker, such as a gene conferring antibiotic resistance to the recombinant mycobacterium incorporating the mutated nucleotide sequence. Also disclosed is a method for preparing a recombinant slow-growing mycobacterium comprising at least one mycobacterial gene containing an unmarked mutation, as well as a vaccine comprising a recombinant slow-growing mycobacterium having at least one mycobacterial gene containing an unmarked mutation dispersed in a physiologically acceptable carrier. Further disclosed is a method of treating or preventing tuberculosis in a subject comprising administering the vaccine of the present invention in an amount effective to treat or prevent tuberculosis in the subject.